



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,901	03/19/2004	Hinnerk Kaiser	P24834	6700
7055	7590	11/30/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C.			MAKI, STEVEN D	
1950 ROLAND CLARKE PLACE			ART UNIT	
RESTON, VA 20191			PAPER NUMBER	

1733

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,901

Applicant(s)

KAISER ET AL.

Examiner

Steven D. Maki

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,8,9 and 11-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8,9,11-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 100306.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Art Unit: 1733

1) The disclosure is objected to because of the following informalities: The specification contains formulas, which applicant has admitted are incorrect. See response filed 9-20-06 and interview summary dated 8-21-06.

Appropriate correction is required.

2) The amendment filed 9-20-06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The subject matter of "A ratio of the width X to the width Y increases as a diameter of a rim DR to which the vehicle tire can be connected decreases". The original disclosure teaches away from the above noted subject matter and thereby fails to reasonably convey the above noted subject matter because the above noted subject matter represents the problem (transferring a profile according to scale) instead of applicant's solution (the mathematical expressions containing the term DR).

Applicant is required to cancel the new matter in the reply to this Office Action.

3) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4) Claims 1-22, 24, 29 and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably

Art Unit: 1733

convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 1, 24 and 29, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of "A ratio of the width X to the width Y increases as a diameter of a rim DR to which the vehicle tire can be connected decreases". The original disclosure teaches away from the above noted subject matter and thereby fails to reasonably convey the above noted subject matter because the above-noted subject matter represents the problem (transferring a profile according to scale) instead of applicant's solution (the mathematical expressions containing the term DR).

In claims 19-21 the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of the first and second angles of the fine indents being with respect to "a radial plane of the tire passing through the center circumferential groove". The original disclosure describes the angles as being with respect to the circumferential direction instead of the radial direction. See paragraphs 16 and 27 of the original disclosure. The description of the radial plane passing through the center circumferential groove fails to correct the above noted new matter because a

Art Unit: 1733

radial plane may extend in the axial direction so as to pass through a center circumferential groove.

5) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan 907

7) **Claims 1-2, 4-6, 8, 14, 17-18, 22-25 and 27-34 are rejected under 35 U.S.C. 102(a, b) as being anticipated by Japan 907 (JP 2003-80907).**

Japan 907 discloses a pneumatic radial tire for use on snow having three circumferential grooves 2, 1, 2, diagonal grooves 3, two shoulder block rows, two center block rows, and sipes ("fine indents"). See figure 1. Japan 907's pneumatic radial tire has a size such as 195/65R15 and therefore inherently has a rubber tread.

With respect to claims 1, 22, 23, 25, 33, and 34, "each diagonal groove being a swept groove and/or a continuously curved groove that extends from the center circumferential groove to a respective tread rubber edge, each diagonal groove running

Art Unit: 1733

essentially continuously up to and beyond the respective tread rubber, and each diagonal groove passing through one of the center block rows and one of the shoulder block rows, whereby the diagonal grooves define blocks in the circumferential direction" (claim 1) and "the blocks being defined by continuously curved diagonal grooves that extend from the center circumferential groove to a respective tread rubber edge, each continuously curved diagonal groove running essentially continuously up to and beyond the respective tread rubber edge, whereby left side continuously curved diagonal grooves pass through the left side inner block row and the left side shoulder block row and whereby right side continuously curved diagonal grooves pass through the right side inner block row and the right side shoulder block row" (emphasis added / claims 23, 25), and "each diagonal groove is both a continuously curved groove and a swept-back groove" (emphasis added, claim 22) reads on the curved diagonal grooves 3 of Japan 907. As to rubber tread (claims 1, 23, 25), Japan 907's pneumatic radial tire has a size such as 195/65R15. One of ordinary skill in the art would readily understand such a tire as having a rubber tread.

The claimed "sinusoidal" fine indents read on the sipes in the shoulder blocks in figure 1 of Japan 907. The claimed fine indents being "one of stepped and saw-toothed" read on the sipes 7 in the center blocks 5 in figure 1 of Japan 907. It is emphasized that the shoulder sipes have a different shape than the center sipes 7.

As to claim 2, Japan 907's tire is for snow.

As to claims 4-6, Japan 907 teaches a tire having a size such as 195/65R15 (tire for a 15 inch rim).

Art Unit: 1733

As to claim 8, note the zigzag sipes in Japan 907's figure 1. In claim 8, "sinusoidal" reads on --zigzag--.

As to claim 14, note center circumferential groove 1.

As to claims 17 and 18, note orientaton of sipes in figure 1 of Japan 907.

As to claim 22, Japan 907's diagonal grooves 3 are curved and form a directional tread.

As to claims 25 and 27-32, Japan 907's center circumferential groove 1 is narrow.

8) Claims 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 907.

As to claims 15 and 16, the claimed spacing of the blocks would have been obvious in view of Japan 907's teaching to provide a tire having a section width such as 195 mm(tire size 195/65R15) with a symmetrical tread in which the center blocks on one side of the circumferential groove are shifted (spaced) with respect to the center blocks in the row on the other side of the center circumferential groove.

As to claims 17-21, it would have been obvious to orient Japan 907's sipes (fine indents) as set forth in claims 17-21 since Japan 907 shows the sipes in the blocks as being oriented at about 80 degrees to the circumferential direction. Claims 19-21 are considered to contain new matter. See 112 first paragraph rejections above. In any event: It would have been obvious to one of ordinary skill in the art to incline Japan 907's sipes at 5-15 degrees (e.g. 10 degrees) with respect to the radial plane since it is taken as well known / conventional per se in the tire tread art to incline sipes at an angle

Art Unit: 1733

of 0-45 degrees with respect to the radial plane to improve traction during breaking / acceleration.

9) **Claims 13, 23-25, 27-30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 907 in view of Europe 577 (EP 846577).**

As to claims 13, 23-25, 27-30 and 32, it would have been obvious to one of ordinary skill in the art to provide the shoulder sipes (fine indents) with a narrower width than the width of the center sipes (center fine indents) since Europe 577, also directed to a winter tire, suggests providing incisions (sipes / fine indents) in shoulder regions with a smaller width than the incisions (sipes / fine indents) in the central region to reduce softening in the shoulder regions and thereby equalize wear and improve ground adhesion.

10) **Claims 25-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 907 in view of Colombo et al (WO 02/068222).**

As to claims 25-34, it would have been obvious to one of ordinary skill in the art to provide Japan 907's grooves such that the center circumferential groove is narrower than the left, right circumferential grooves (claims 25, 31 and 32) / the transverse grooves (diagonal grooves) have a width less than either of the center circumferential groove and the left and right circumferential grooves (claim 26) since Colombo et al, which like Japan 907 teaches a directional tire tread for snow having three circumferential grooves and diagonal grooves, suggests providing the *center circumferential groove* with a width of 4 mm to 6 mm, providing the *left, right*

Art Unit: 1733

circumferential grooves with a width of 4 mm to 8 mm and providing the *transverse grooves* with a width of 2 mm to 5 mm (page 9).

Japan 907, German 156 and Diensthuber

11) Claims 1-2, 4-6, 8, 10-12 and 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 907 in view of German 156 (DE 19705156) and Diensthuber (US 5,660,651).

In claim 1, the sinusoidal sipes and stepped / sawtoothed sipes are interpreted as reading on Japan 907's sipes. In any event: As to claims 1-2, 4-6, 8, 10-12 and 14-22, it would have been obvious to one of ordinary skill in the art to provide Japan 907's tire such that the shoulder sipes have a sinusoidal shape and the center sipes have a stepped or sawtoothed shape as claimed since (1) Japan 907 teaches using shoulder sipes having a different shape than center sipes (see figures), (2) German 156, also directed to a winter tire having a directional tread comprising shoulder blocks and center blocks, suggests providing the fine cuts (sipes / indents) in the shoulder blocks with a wavy configuration (page 2 of machine translation) and (3) Diensthuber suggests using wave or zigzag sipes in shoulder blocks to provide high block rigidity for improving handling and using stepped or sawtoothed sipes in center blocks so that the sipes open readily and provide gripping edges..

As to claim 2, Japan 907's tire is for snow.

As to claims 4-6, Japan 907 teaches a tire having a size such as 195/65R15 (tire for a 15 inch rim).

Art Unit: 1733

As to claim 8, note the zigzag sipes in Japan 907's figure 1. In claim 8, "sinusoidal" reads on --zigzag--.

As to claim 14, note center circumferential groove 1.

As to claims 15 and 16, the claimed spacing of the blocks would have been obvious in view of Japan 907's teaching to provide a tire having a section width such as 195 mm (tire size 195/65R15) with a symmetrical tread in which the center blocks on one side of the circumferential groove are shifted (spaced) with respect to the center blocks in the row on the other side of the center circumferential groove.

As to claims 17-21, it would have been obvious to orient Japan 907's sipes (fine indents) as set forth in claims 17-21 since Japan 907 shows the sipes in the blocks as being oriented at about 80 degrees to the circumferential direction. Claims 19-21 are considered to contain new matter. See 112 first paragraph rejections above. In any event: It would have been obvious to one of ordinary skill in the art to incline Japan 907's sipes at 5-15 degrees (e.g. 10 degrees) with respect to the radial plane since it is taken as well known / conventional per se in the tire tread art to incline sipes at an angle of 0-45 degrees with respect to the radial plane to improve traction during breaking / acceleration.

As to claim 22, Japan 907's diagonal grooves 3 are curved and form a directional tread.

12) Claims 13, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 907 in view of German 156 and Diensthuber as applied above and further in view of Europe 577 (EP 846577).

Art Unit: 1733

As to claims 13, 23-25, 27-30 and 32, it would have been obvious to one of ordinary skill in the art to provide the shoulder sipes (fine indents) with a narrower width than the width of the center sipes (center fine indents) since Europe 577, also directed to a winter tire, suggests providing incisions (sipes / fine indents) in shoulder regions with a smaller width than the incisions (sipes / fine indents) in the central region to reduce softening in the shoulder regions and thereby equalize wear and improve ground adhesion.

13) **Claims 25-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 907 in view of German 156, Diensthuber and Europe 577 as applied above and further in view of Colombo et al (WO 02/068222).**

As to claims 25-34, it would have been obvious to one of ordinary skill in the art to provide Japan 907's grooves such that the center circumferential groove is narrower than the left, right circumferential grooves (claims 25, 31 and 32) / the transverse grooves (diagonal grooves) have a width less than either of the center circumferential groove and the left and right circumferential grooves (claim 26) since Colombo et al, which like Japan 907 teaches a directional tire tread for snow having three circumferential grooves and diagonal grooves, suggests providing the *center circumferential groove* with a width of 4 mm to 6 mm, providing the *left, right circumferential grooves* with a width of 4 mm to 8 mm and providing the *transverse grooves* with a width of 2 mm to 5 mm (page 9).

Art Unit: 1733

Remarks

14) Applicant's arguments with respect to claims 1-2, 4-6, 8-9 and 11-34 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 9-20-06 have been fully considered but they are not persuasive.

The 112 non-enablement rejection has been withdrawn since the subject matter of the formulas containing DR has been removed from the claims. With respect to the error regarding "Y/X", the record now shows that the formulas of the original disclosure contain at least two errors - the ratio term "Y/X" and the term "(Dr - 100)". One of ordinary skill in the art cannot determine the correct solutions for the errors since more than one solution is possible. One of ordinary skill in the art is not provided with enough guidance from the original disclosure to pick and choose the correct solution from (1) changing Y/X and (DR-100) to X/Y and (DR/100) respectively, (2) changing 1-(DR-100) to 1/(DR/100), (3) making some other change, etc.

As to Japan 907, applicant acknowledges that the fine indents of the shoulder blocks are sinusoidal but argues that the fine indents of the center blocks in figure 1 are also sinusoidal. This argument is not persuasive since Japan 907's center blocks comprise sipes having a different shape than the shape of the shoulder sipes.

Applicant argues that German 156, Europe 577 and Colombo et al do not teach swept / continuously curved grooves and the differently shaped sinusoidal fine indents and stepped/ sawtoothed fine indents. This argument is not persuasive since Japan

Art Unit: 1733

907 is relied upon to teach swept / continuously curved grooves and differently shaped sipes (fine indents).

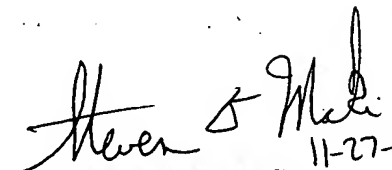
15) No claim is allowed.

16) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
November 27, 2006


STEVEN D. MAKI
PRIMARY EXAMINER
11-27-06